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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,227	06/25/2003	John Bossert Brown	17936	5568

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EXAMINER

HAMMOND, BRIGGITTE R

ART UNIT	PAPER NUMBER
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2833

DATE MAILED: 03/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

A

Office Action Summary	Application No. 10/603,227	Applicant(s) BROWN ET AL.	
	Examiner Brigitte R. Hammond	Art Unit 2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 20 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 17-30 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5, 11 and 17 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-10, 12-15 and 18-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2,4,6-10 and 23-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Pfaff 6,016,254. Pfaff discloses in fig. 5, a socket connector having a socket base 14 having a slot 44 oriented at a first angle with respect to a bottom surface of said socket base; and a contact 18f having a base beam 28F and a retention portion (lower 56F), said base beam 28F extending along and being held against said bottom surface of said socket base, said retention portion forming an initial angle with said base beam before said contact is assembled (see first slot on right hand side of fig. 5) with said socket base that differs from said first angle, said socket base receiving said contact 18f with said retention portion held in said slot such that an angle between said base beam and said retention portion is changed from said initial angle (see fig. 5).

Regarding claim 2, the retention portion 56F includes barbs that engage the slot.

Regarding claim 4, the retention portion is narrower than said base beam such that said base beam is flexibly formed at one end with said retention portion (see fig. 4).

Regarding claim 6, a portion 28f of the base beam for each of said contacts abuts against said bottom surface of said socket base to maintain said base beams coplanar with one another in a contact seating plane.

Regarding claim 7, a portion 28f of the base beam for each of said contacts carries a solder ball 30, said base beams abutting against the bottom surface of the socket base to maintain said solder balls coplanar with one another.

Regarding claim 8, said base beam 28f is a flexible arm extending downward therefrom, said flexible arm being configured to receive a solder ball.

Regarding claim 9, said base beam and retention portion form said initial angle with one another when said contact is in a relaxed, unbiased condition (see first slot on right hand side of fig. 5).

Regarding claim 10, when said contact of Pfaff is mounted to said socket base, said angle between said retention portion and base beam increases (see last slot on left hand side of fig. 5).

Regarding claim 23, said contact 18 includes a contact arm 24f that joins a support portion 26f that extends through said socket base to join said base beam at said bottom surface of said socket base when said contact is fully assembled with said socket base.

Regarding claim 24, the base beam of said contact extends along a contact seating plane that is coplanar with said bottom surface of said socket base.

Regarding claim 25, Pfaff discloses an electrical contact, comprising: a base beam 18 extending along a contact seating plane 18f, said base beam being configured to be maintained coplanar with, and flush against, a bottom surface of a socket connector; a retention portion 56f formed with said base beam, said retention portion being configured to be snugly held by the socket connector, said retention

portion being configured to be inserted into the socket connector through the bottom surface; and a contact arm 24f formed with said base beam, said contact arm being configured to project from a top surface of the socket connector.

Regarding claim 26, Pfaff discloses the base beam being configured to be positioned underneath a channel formed through the socket connector, the contact arm extending from the channel.

Regarding claim 27, Pfaff discloses the contact arm being oriented to project at an acute angle with respect to the top surface of the socket connector.

Regarding claim 28, Pfaff discloses the base beam and retention portion being formed at an acute angle with respect to one another such that said retention portion exerts a force upon said base beam to retain said base beam against the bottom surface of the socket connector (see fig. 5).

Regarding claim 29, Pfaff discloses the electrical contact further comprising a solder ball carrier beam 41f joined at an intermediate point to said base beam, said carrier beam extending downward from said base beam away from the bottom surface of the socket connector.

Regarding claim 30, Pfaff discloses the retention portion 56f being configured to be held in a slot provided in the socket connector.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pfaff. Regarding claim 18, Pfaff discloses a socket connector, comprising: a base 14 carrying a contact 18f, said contact including a contact arm 24f extending beyond a top surface of said base, said contact including a base beam 26f extending along a bottom surface of said base (at 28f), said base beam being configured to carry a solder ball (at 28f); and a socket cover 12 releasably connected to said base proximate said top surface and covering said contact arm, said socket cover having a rigid top surface that contains a heat transfer aperture (col. 3, lines 60-66) configured to permit heat to transfer to said contact. Pfaff does not disclose a plurality of apertures. However, it would have been obvious to one of ordinary skill to modify the connector of Pfaff by providing a plurality of apertures instead of one aperture since it has been held that mere duplication of essential working parts of a device involves only routine skill in the art. *St Regis Paper Co. V. Bemis Co.*, 193 USPQ 8.

Regarding claim 19, the base of Pfaff includes a channel (area near 60f) and a slot 44 proximate each other, said slot being oriented at a first angle (see attachment) with said bottom surface of said base, said contact having a retention portion 56f that forms an initial angle (see attachment) with said base beam that differs from said first angle before said contact is assembled with said base, said base holding said contact such that said base beam is biased by said bottom surface of said base to change an angle between said base beam and retention portion.

Regarding claim 20, the base of Pfaff includes a slot 44, said contact 18f having a retention portion that is formed with said base beam, said retention portion having retention barbs extending from sides thereof said retention portion extending through said slot such that said retention barbs engage said base to retain said contact within said base.

Regarding claims 18, 21 and 22, the recitation "configured to" is seen to only recite the function without further defining any structure to differentiate from the reference. The reference can "be placed in an oven" and can "facilitate a soldering process", therefore it makes the functional recitation unpatentable. And it does not constitute a limitation in any patentable sense.

Regarding claim 3, Pfaff discloses the invention substantially as claimed. Pfaff discloses a socket cover 12, releasably connected to said base and covering said contact, said socket cover having a rigid top surface that contains an aperture to permit heat transfer to said contact. Pfaff does not disclose "apertures". However, adding another aperture would have been an obvious duplication of Pfaff's aperture, since it has been held that mere duplication of essential working parts of a device involves only routine skill in the art. *St Regis Paper Co. V. Bemis Co.*, 193 USPQ 8. One skilled in the art would be motivated to increase the number of apertures of Pfaff to increase the surface area of the cover for the associated heat sink.

Allowable Subject Matter

Claims 5 and 11-15 and 17 are allowed.

Response to Arguments

In response to applicant's argument that "Pfaff's contact does not include a base beam extending along and held against the bottom surface of the socket base, nor a retention portion forming an initial angle with the base beam before assembly and projecting upward from the bottom surface into the slot". The Examiner disagrees and draws the Applicant's attention to the USC 102 Rejection above.

In response to applicant's argument that "Pfaff's contact 18 does not include a base beam that extends along a bottom surface of the base, nor does Pfaff teach or suggest the claimed socket cover, nor is Pfaff configured to engage a transport tool". The Examiner disagrees. Pfaff's contact 18 does include a base beam 28F that extends along a bottom surface of the base. Pfaff teaches the claimed socket cover (see rejection of claim 18 above) and is Pfaff configured to engage a transport tool, since it has been held that the recitation that an element is "configured to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brigitte R. Hammond whose telephone number is 571-272-2006. The examiner can normally be reached on Mon.-Thurs. and Alternate Fridays from 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571-272-2800 ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Brigitte R. Hammond
Primary Examiner
Art Unit 2833

March 24, 2005